

## List of publications

### A) Articles

1. S. Miho, T. Fumoto, Y. Mise, K. Imato, S. Akiyama, M. Ishida and Y. Ooyama\*; Development of highly sensitive fluorescent sensor and fluorescent sensor-doped polymer films for trace amounts of water based on photo-induced electron transfer; *Mater. Adv.*, **2021**, 2, 7662-7670. Back Cover に採用
2. Y. Ooyama\*, K. Ohira, Y. Kagawa, and K. Imato; Synthesis, Optical and Electrochemical Properties of Benzofuro[2,3-*c*]carbazoloquinol Fluorescent Dyes; *Electrochemistry*, **2021**, 89, 562-566.
3. K. Obayashi, M. Yasui, K. Imato, S. Akiyama, M. Ishida, and Y. Ooyama\*; S Development of 4,4'-bibenzo[*c*]thiophene fluorophores with substituents on the thiophene rings; *New J. Chem.*, **2021**, 45, 17085-17094. Front Cover に採用
4. I. Imae, H. Yamane, K. Imato, Y. Ooyama; Thermoelectric properties of PEDOT:PSS/SWCNT composite films with controlled carrier density; *Compos. Commun.*, **2021**, 27, 100897.
5. K. Obayashi, T. Higashino, K. Imato and Y. Ooyama\*; Synthesis, photophysical and electrochemical properties of 1,1',3,3'-tetrasubstituted-4,4'-bibenzo[*c*]thiophene derivative with different substituents on the thiophene rings; *New J. Chem.*, **2021**, 45, 13528-13261. Front Cover に採用
6. T. Higashino and Y. Ooyama\*; Organohalogenochromism (OHC) of Dyes: D- $\pi$ -A Pyrazinium Dye; *Chem. Lett.*, **2021**, 50, 1530-1533.
7. K. Ohira, K. Imato and Y. Ooyama\*; Development of phenazine-2,3-diol-based photosensitizers: effect of formyl groups on singlet oxygen generation; *Mater. Chem. Front.*, **2021**, 5, 5298-5304. Front Cover に採用
8. Y. Hayashi, A. Morimoto, A. Ban, Y. Goto, T. Maeda, T. Enoki, Y. Ooyama, and S. Yagi; Novel group 14 element-bridged bithiophene dimers appended with terminal electron-withdrawing groups: Red-to-near infrared fluorescence and efficient photosensitized singlet oxygen generation; *Dyes Pigm.*, **2021**, 193, 109498.
9. K. Obayashi, K. Imato, S. Aoyama, T. Enoki, S. Akiyama, M. Ishida, S. Suga, K. Mitsudo and Y. Ooyama\*; Synthesis, optical and electrochemical properties of 4,4'-bibenzo[*c*]thiophene derivatives; *RSC Adv.*, **2021**, 11, 18870-18880.
10. T. Fumoto, S. Miho, Y. Mise, K. Imato and Y. Ooyama\*; Polymer films doped with fluorescent sensor for moisture and water droplet based on photo-induced electron transfer; *RSC Adv.*, **2021**, 11, 17046-17050.
11. Y. Mise, K. Imato, T. Ogi, N. Tsunoji and Y. Ooyama\*; Fluorescence sensors for detection of water based on tetraphenylethene-anthracene possessing both solvatofluorochromic properties and aggregation-induced emission (AIE) characteristics; *New J. Chem.*, **2021**, 45, 4164-4173. Back Cover に採用
12. Y. Hayashi, A. Morimoto, T. Maeda, T. Enoki, Y. Ooyama, Y. Matsui, H. Ikeda and S. Yagi; Synthesis of novel  $\pi$ -extended D-A-D-type dipyrido[3,2-*a*:2',3'-*c*]phenazine derivatives and their photosensitization of singlet oxygen generation; *New J. Chem.*, **2021**, 45, 2264-2275.
13. N. Shida, K. Ninomiya, N. Takigawa, K. Imato, Y. Ooyama, I. Tomita, S. Inagi; Diversification of Conjugated Polymers via Postpolymerization Nucleophilic Aromatic Substitution Reactions with Sulfur-, Oxygen-, and Nitrogen-based Nucleophiles; *Macromolecules*, **2021**, 54, 725-735.
14. I. Imae, R. Akazawa, Y. Ooyama, Y. Harima; Investigation of organic thermoelectric materials using potential - step chronocoulometry: Effect of polymerization methods on thermoelectric properties of poly(3-hexylthiophene); *J. Polym. Sci.*, **2020**, 58, 3004-3008 (Cover Picture).
15. S. Tsumura, K. Ohira, K. Imato and Y. Ooyama\*; Development of optical sensor for water in acetonitrile based on

- propeller-structured BODIPY-type pyridine-boron trifluoride complex; *RSC Adv.*, **2020**, *10*, 33836-33843.
16. S. Tsumura, K. Ohira, K. Hashimoto, K. Imato and Y. Ooyama\*; Synthesis, optical and electrochemical properties of propeller-type 3,5,8-trithienyl-BODIPY dyes; *Mater. Chem. Front.*, **2020**, *4*, 2762-2771.
  17. D. Jinbo, K. Ohira, K. Imato and Y. Ooyama\*; Development of fluorescent sensors based on a combination of PET (photo-induced electron transfer) and FRET (Förster resonance energy transfer) for detection of water; *Mater. Adv.*, **2020**, *1*, 354-362. Back Cover に採用
  18. I. Imae, T. Goto, Y. Ooyama, and Y. Harima; Thermoelectric properties of poly(3,4-ethylenedioxythiophene) with fluorine-containing polyanion as dopant; *Polymer*, **2020**, *199*, 122538(1-7).
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  21. Y. Adachi, T. Nabeya, T. Nomura, K. Kondo, K. Kawakami, Y. Ooyama and J. Ohshita; Direct comparison of dithienosilole and dithienogermole as  $\pi$ -conjugated linkers in photosensitizers for dye-sensitized solar cells; *Dalton Trans.*, **2019**, *48*, 16671-16676.
  22. K. Imato, T. Enoki and Y. Ooyama\*; Development of an intramolecular charge transfer-type colorimetric and fluorescence sensor for water by fusion with julolidine structure and complexation with boron trifluoride; *RSC Adv.*, **2019**, *9*, 31466-31473.
  23. K. Imato, T. Enoki, K. Uenaka and Y. Ooyama\*; Synthesis and Photophysical and Electrochemical Properties of Pyridine-, Pyrazine- and Triazine-based (D- $\pi$ )<sub>2</sub>A Fluorescent Dyes; *the thematic issue "Dyes in modern organic chemistry"* in *Beilstein J. Org. Chem.*, **2019**, *15*, 1712-1721 (Invited Article).
  24. D. Jinbo, K. Imato and Y. Ooyama\*; Fluorescent sensor for water based on photo-induced electron transfer and Förster resonance energy transfer: anthracene-(aminomethyl)phenylboronic acid ester-BODIPY structure; *RSC Adv.*, **2019**, *9*, 15335-15340. **Selected as Editors' collection focusing on Fluorescent Sensors in 2019**
  25. J. Ohshita, M. Sugino, Y. Ooyama and Y. Adachi; Synthesis of Pyridinothienogermoles as Unsymmetrically Condensed Germoles; *Organometallics*, **2019**, *38*, 1606-1613.
  26. J. Ohshita, K. Yamaji, Y. Ooyama, Y. Adachi, M. Nakamura and S. Watase; Synthesis, Properties, and Complex Formation of Antimony- and Bismuth-Bridged Bipyridyls; *Organometallics*, **2019**, *38*, 1516-1523.
  27. I. Imae, M. Shi, Y. Ooyama, and Y. Harima; Seebeck Coefficients of Poly(3,4-ethylenedioxythiophene):poly(styrene sulfonate) (PEDOT:PSS) Correlated with Oxidation Levels; *J. Phys. Chem. C*, **2019**, *123*, 4002-4006.
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  30. H. Arase, T. Kai, S. Taniguchi, Y. Adachi, Y. Ooyama, T. Mori, M. Yanase, S. Hayakawa, Y. Kunugi and J. Ohshita; Hydrophobic Modification of SiO<sub>2</sub> Surface with Disilanobiphenyl and Disilanobithiophene and the Application to Pentacene-based Organic Transistors; *Compos. Interfaces*, **2019**, *26*, 221-231.

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